



# March 2023

# Monthly Hydrologic Report (E5)

NWS Austin/San Antonio, TX

Prepared by: Chris Morris

April 3, 2023

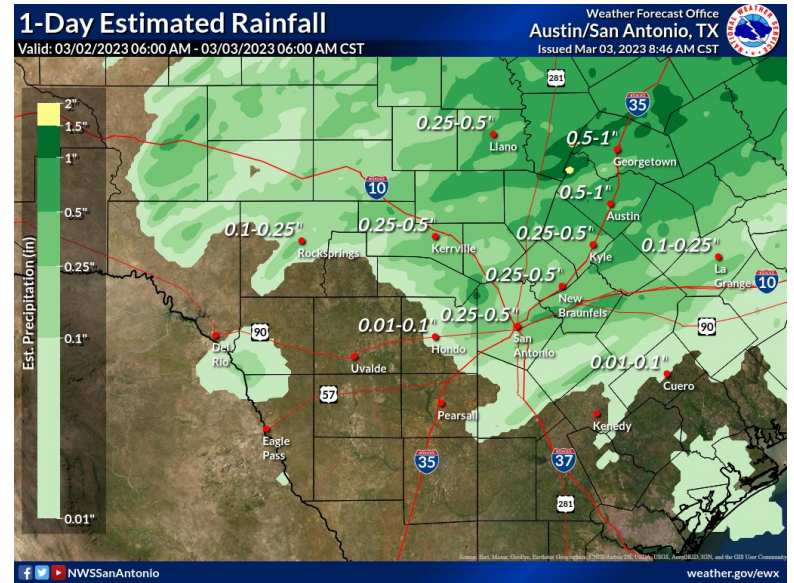
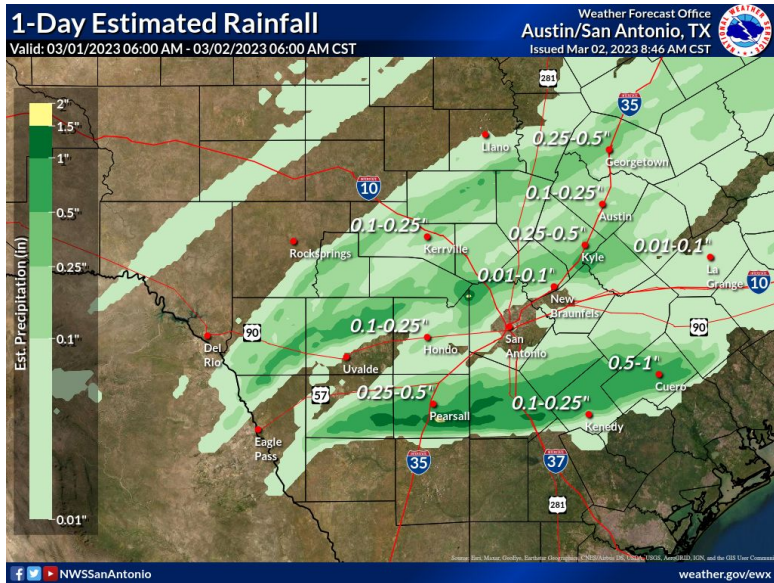
**X** An X inside this box indicates that no flooding occurred within this hydrologic service area.



# Monthly Summary

## Recap

- A severe thunderstorm developed during the early morning hours of the [2nd](#) over Zavala County. This thunderstorm would track eastwards through Atascosa County before diminishing over DeWitt County. While this storm brought a swath of 0.75" to 1.25", it also resulted in a maximum of 2.5" between Dilley and Pearsall in Frio County.
- A secondary swath of severe storms moved across the region during the afternoon and overnight hours of the [2nd](#) and brought widespread rainfall to the area. <https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=PNSEWX&e=202303031558>

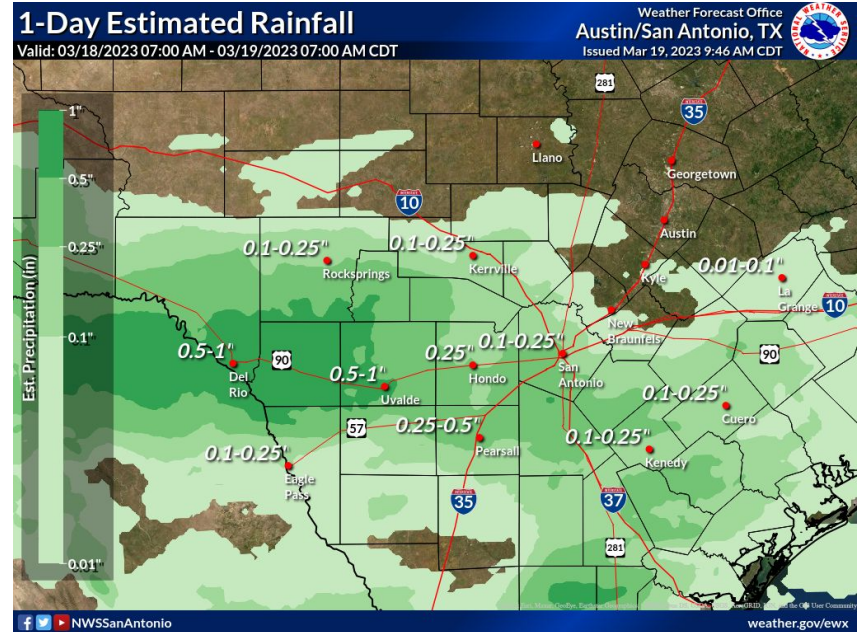
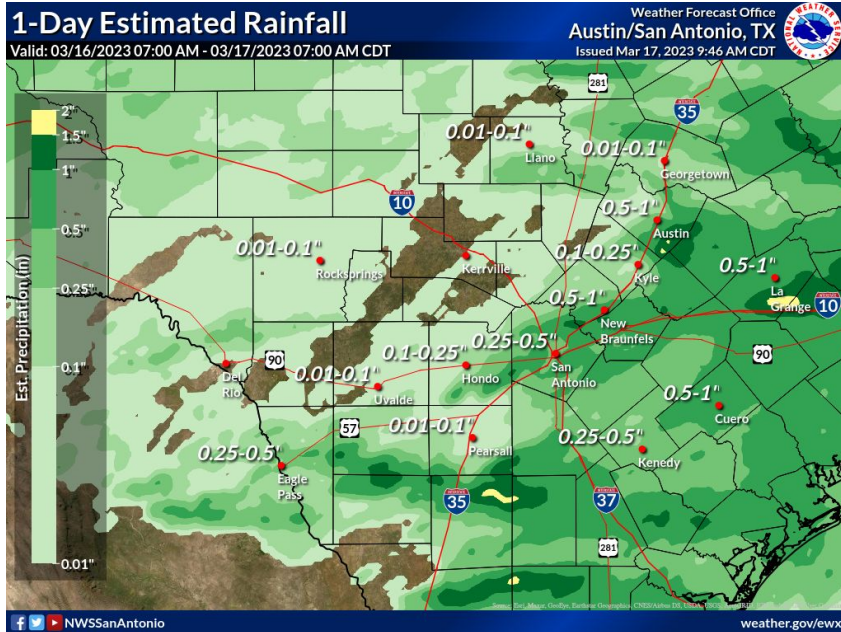




# Monthly Summary

Recap cont.

- A cold front dropped across the forecast area during the overnight hours of the [16th into the 17th](#) bringing strong storms. These storms produced between 0.75" to 1.5" along the I-35 corridor, and across portions of the winter garden.
- Active westerly flow aloft allow for a prolonged period of light rainfall on the [18th](#) across the western Edwards Plateau which resulted in amounts from 0.5" to 1"

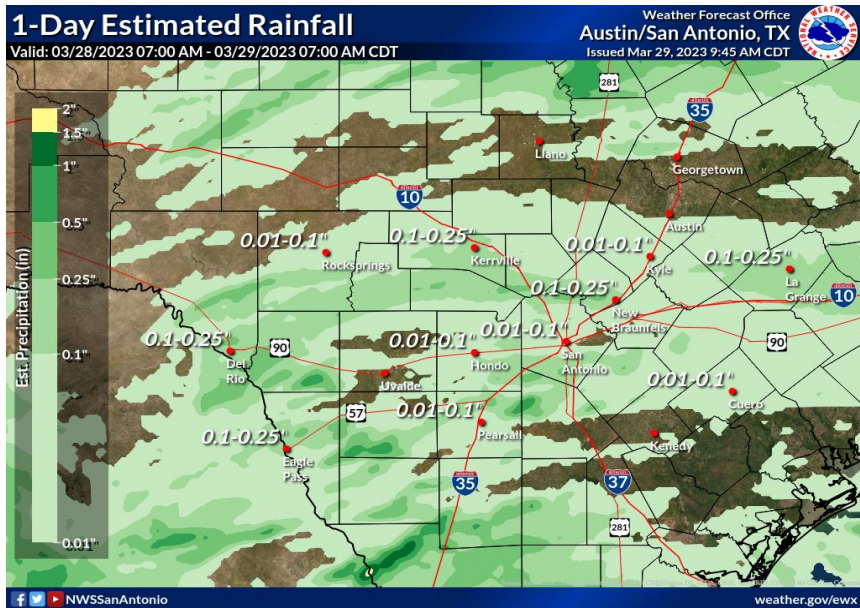
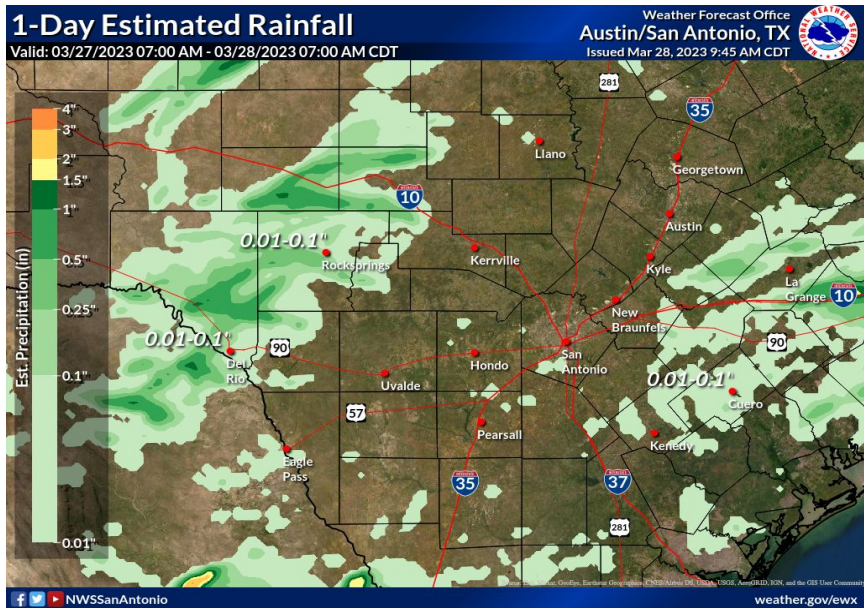




# Monthly Summary

Recap cont.

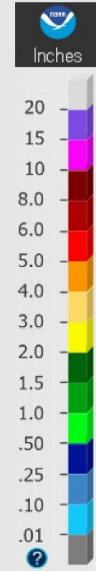
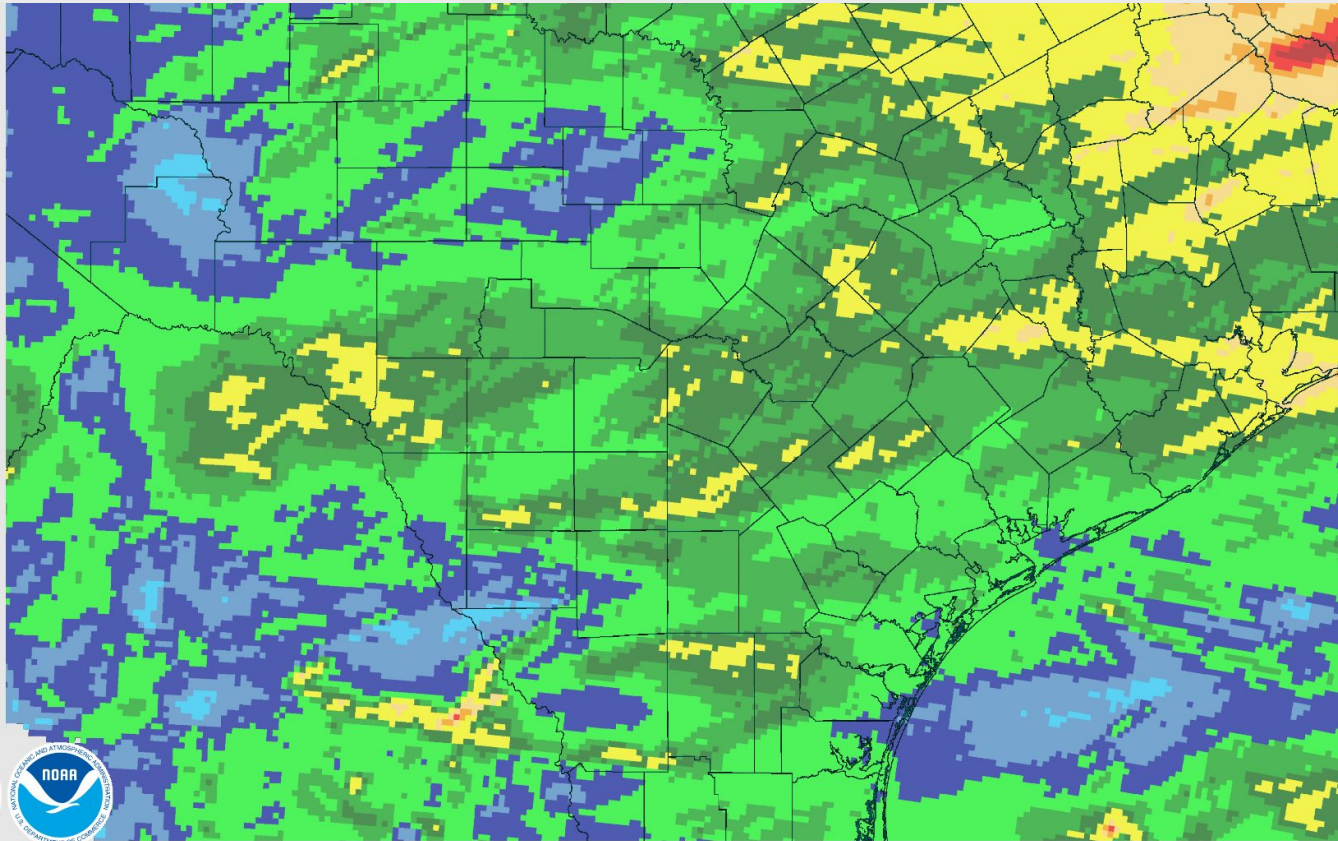
- Another disturbance moved through on the 28th into the 29th which brought localized rainfall amounts across the western Edwards Plateau of 0.50" to 1.25"





# March 2023 Rainfall

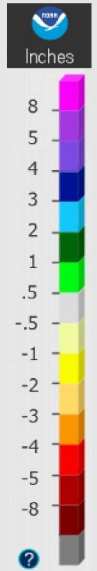
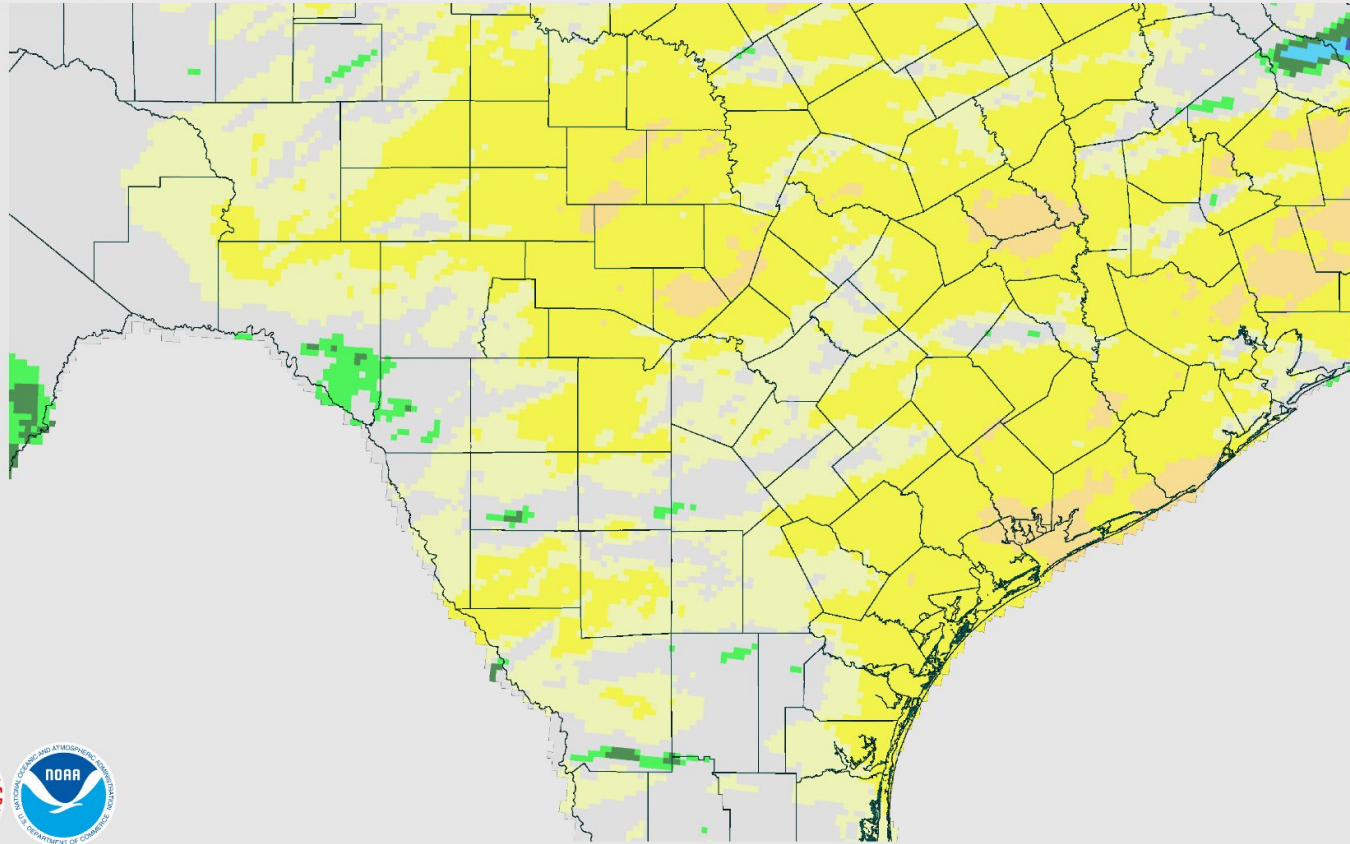
Observed Rainfall (Inches)





# March 2023 Rainfall

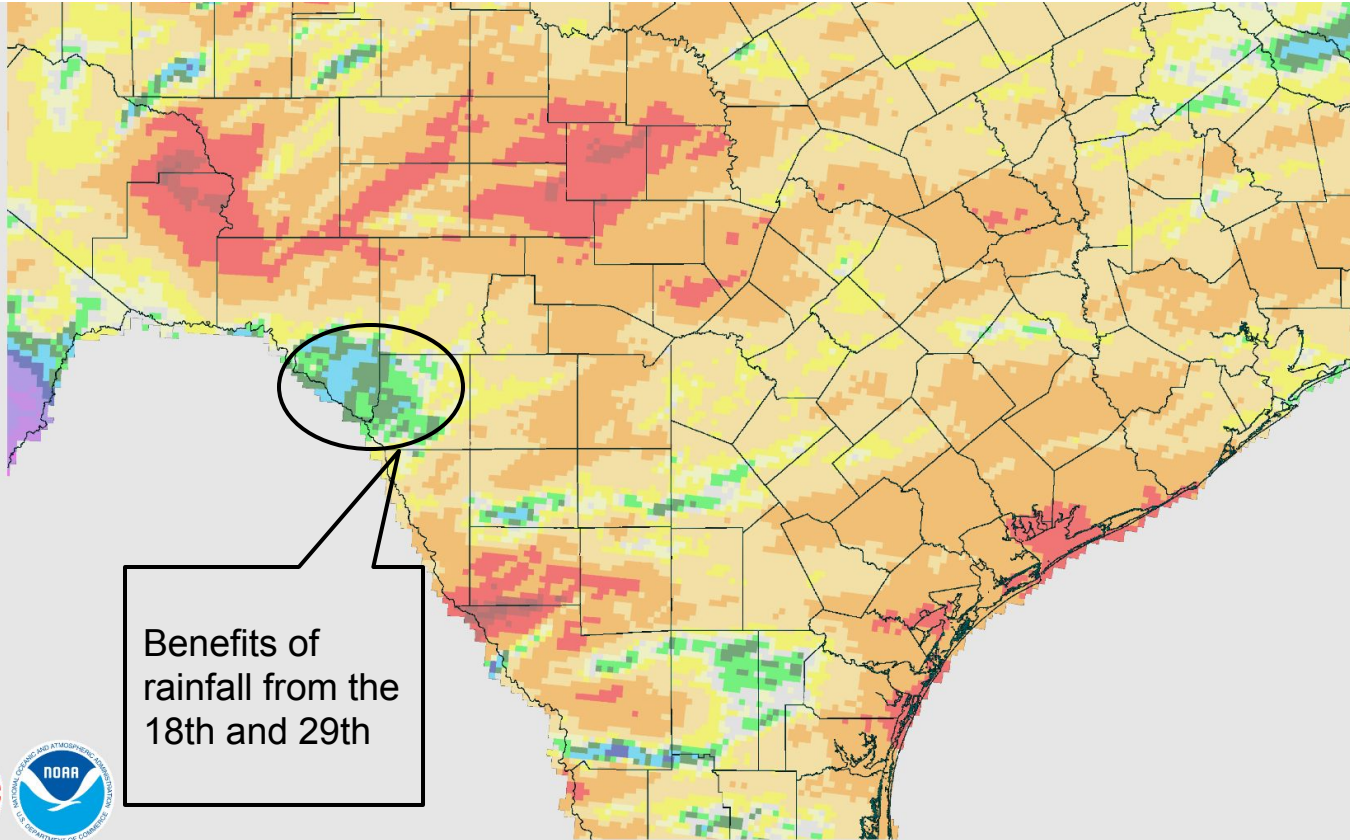
Departure from Normal Rainfall (Inches)





# March 2023 Rainfall

Percent of Normal Rainfall (%)



Benefits of rainfall from the 18th and 29th

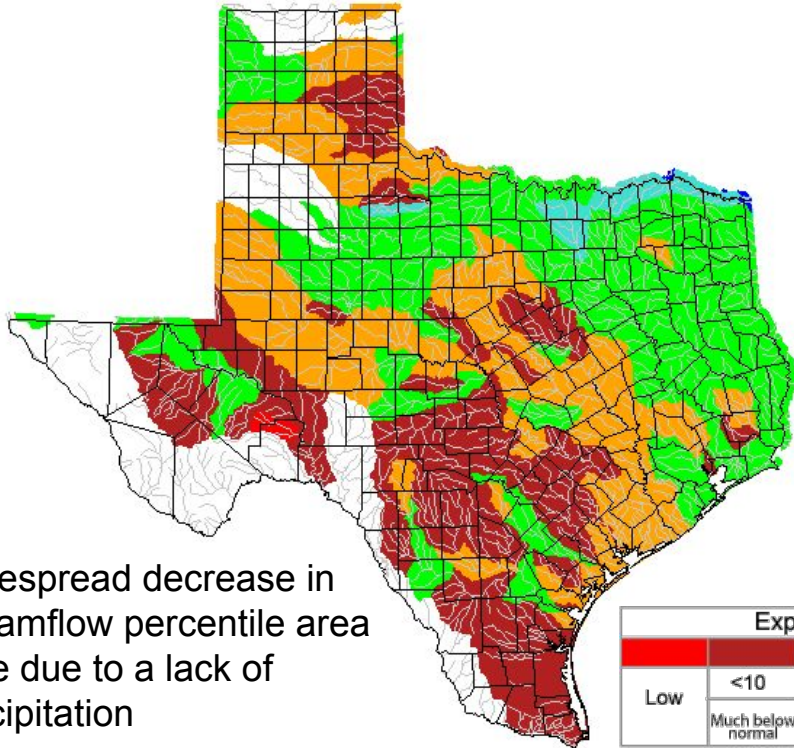




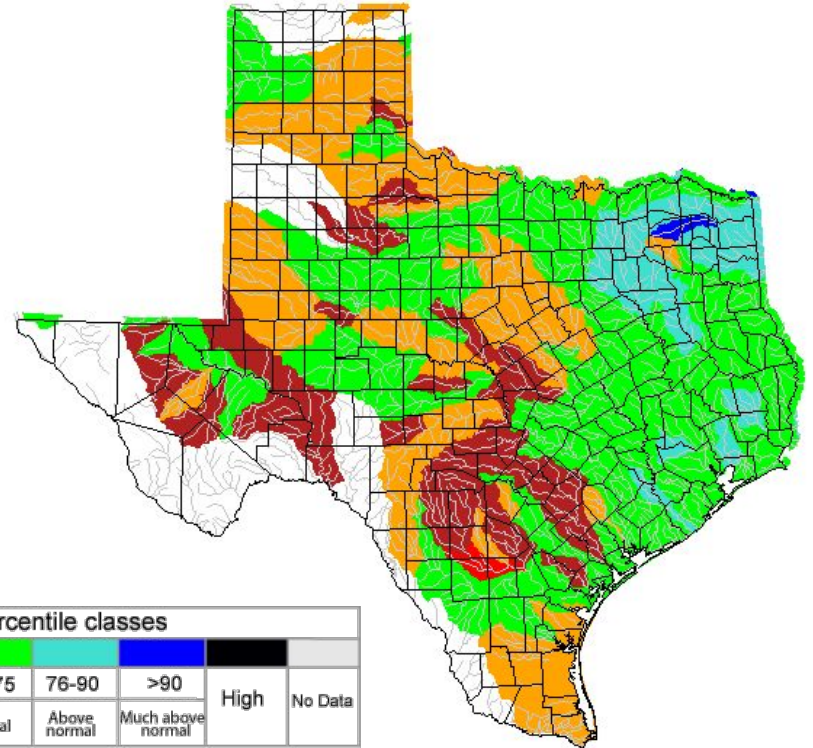
# March 2023 - Historical Streamflow Comparison

## Streamflow Comparison

March 2023



February 2023



Widespread decrease in streamflow percentile area wide due to a lack of precipitation

Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		







# Climate Station Rainfall Data For the Month

Austin/San Antonio Area

	<b>Monthly Rainfall</b>	<b>Monthly Average</b>	<b>2023 Rainfall Through Month</b>	<b>1991-2020 Normal Through Month</b>	<b>Percent of Normal</b>
Austin – Bergstrom	1.90”	2.90”	4.94”	7.61”	65%
Austin – Mabry	1.64”	2.88”	4.16”	7.41”	56%
Del Rio	1.85”	1.18”	2.06”	2.42”	85%
San Antonio	1.31”	2.31”	3.17”	6.01”	53%

\*The monthly averages and normal values are for the period 1991-2020





# Climate Station Rainfall Data For the Month

Nearby Offices:

	Monthly Rainfall	Monthly Average	2023 Rainfall Through Month	1991-2020 Normal Through Month	Percent of Normal
College Station	1.37"	3.41"	6.34"	9.74"	65%
Corpus Christi	0.72"	2.28"	1.63"	4.96"	33%
Laredo	0.41"	1.60"	0.74"	3.33"	22%
San Angelo	0.57"	1.48"	2.03"	3.60"	56%
Victoria	0.78"	2.99"	8.07"	7.62"	106%
Waco	1.38"	3.31"	6.10"	8.58"	71%

\*The monthly averages and normal values are for the period 1991-2020





# Reservoir Data For the Month

Data from the TWDB Water Data For Texas Dashboard

<b>Reservoir</b>	<b>Conservation Elevation (feet)</b>	<b>End of Month Elevation (feet)</b>	<b>Monthly Change (Feet)</b>
Lake Buchanan	1020	1001.40	-0.50
Lake Travis	681	638.47	-1.03
Canyon Lake	909	897.11	-0.69
Medina Lake	1064.2	981.58	-1.02
Lake Amistad	1117	1075.56	-4.64





# Hydrologic Products Issued for the Month

Product Issued	Number Issued	Additional Comments
River Flood Warning (FLW)	0	
River Flood Statement/Flood Advisory (FLS)	0	
Flash Flood Watch (FFA)	0	
Flash Flood Warning (FFW)	0	
Flash Flood Statement (FFS)	0	
Hydrologic Outlook (ESF)	6	AHPS probabilistic forecasts for the Brazos, Colorado, Guadalupe, San Antonio, Pecos, and Nueces Rivers



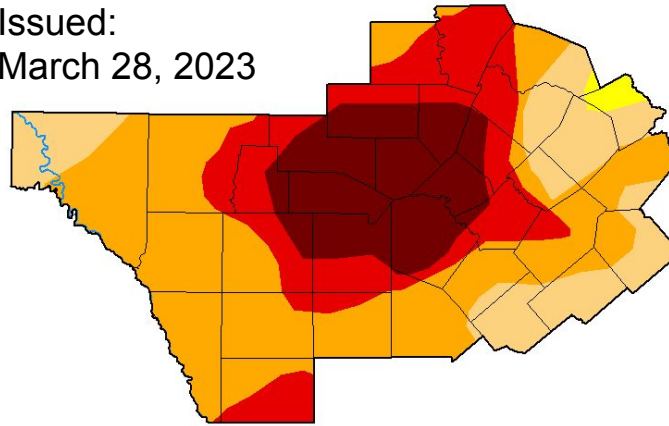
# Drought Conditions

## Monthly Drought Monitor Comparison

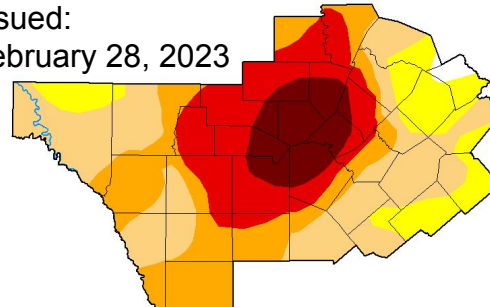
Despite much of the area receiving rainfall over the month of March, the amounts were between 1” to 2” below normal. Both short term and long term drought conditions resulted in widespread drought categories worsened across the region.

- D3/D4 drought encompasses 40% of the CWA
- Drought doesn't affect 1% of the CWA

Issued:  
March 28, 2023



Issued:  
February 28, 2023



**March 28, 2023**

(Released Thursday, Mar. 30, 2023)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	0.00	100.00	99.04	82.13	40.30	18.32
<b>Last Week</b> 03-21-2023	0.95	99.05	89.35	75.39	34.38	16.60
<b>3 Months Ago</b> 12-27-2022	7.86	92.14	74.62	36.84	20.31	6.00
<b>Start of Calendar Year</b> 01-03-2023	6.21	93.79	79.46	39.44	20.31	8.65
<b>Start of Water Year</b> 09-27-2022	1.55	98.45	85.39	51.70	21.77	4.98
<b>One Year Ago</b> 03-29-2022	5.75	94.25	89.54	78.53	49.55	3.51

Intensity:





# One Month Outlook

Looking at the Monthly Outlook for April

- The Precipitation Outlook has transitioned to leaning above normal chances.
- The Temperature Outlook continues to lean towards above normal for the entire area.

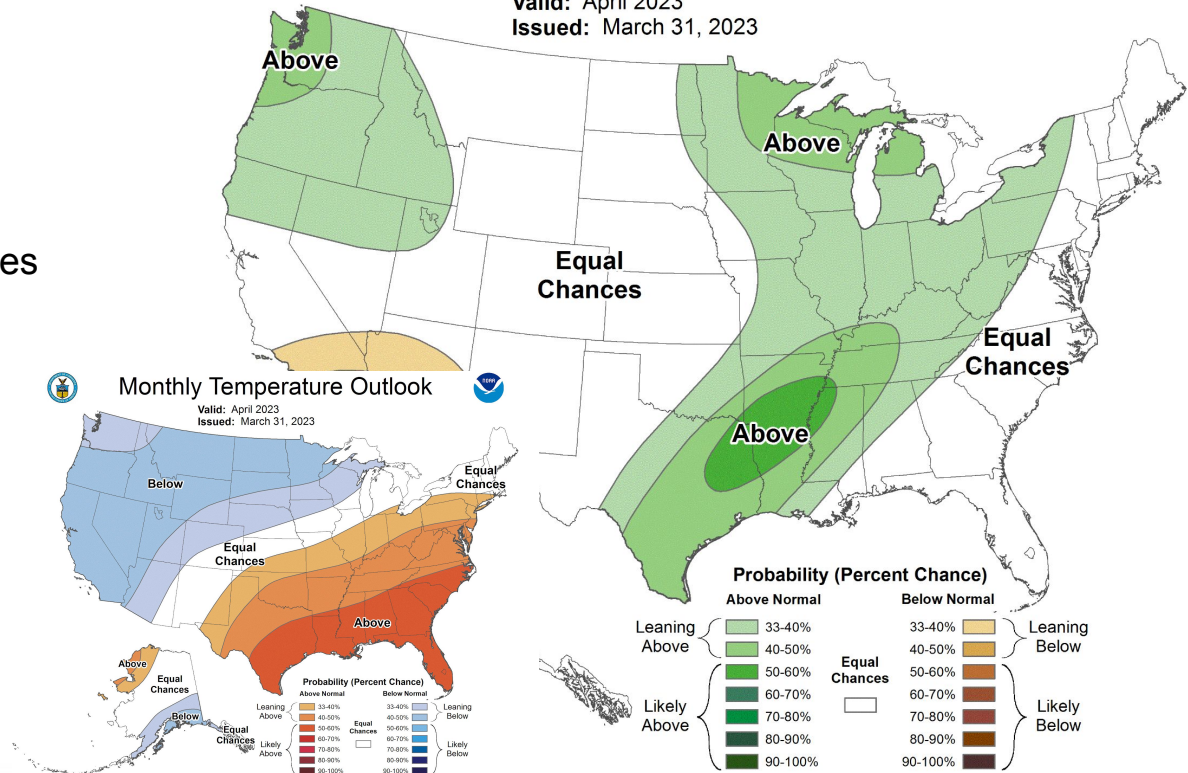
[Click for latest graphics](#)



## Monthly Precipitation Outlook



Valid: April 2023  
Issued: March 31, 2023





# Three Month Outlook

Looking at the Seasonal Outlooks

- The Precipitation Outlook continues to show equal chances for above, below, normal amounts.
- The Temperature Outlook continues to show above normal for the entire area.

[Click for latest graphics](#)

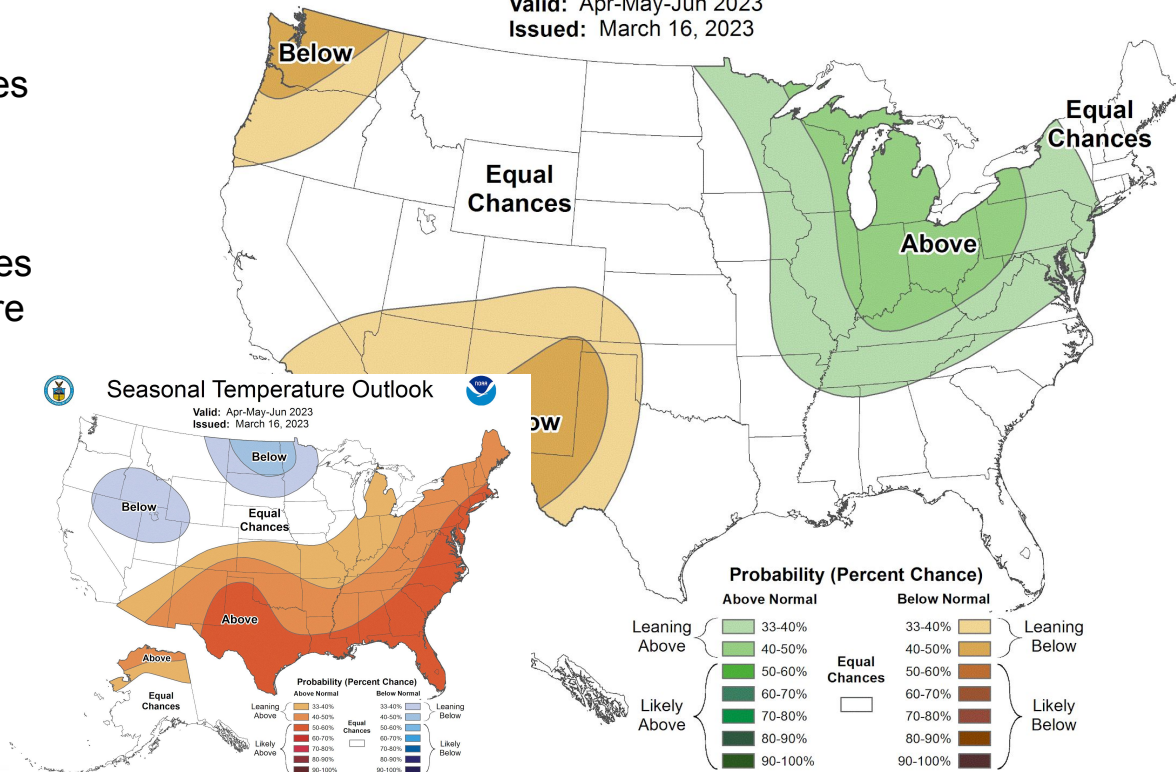


## Seasonal Precipitation Outlook



Valid: Apr-May-Jun 2023

Issued: March 16, 2023





**For additional rainfall, stream, soil moisture, or drought information please refer to the links provided below.**

Daily, Monthly and Yearly summaries of precipitation and departure from normal are available from the West Gulf River Forecast Center at: <http://www.weather.gov/wgrfc/>

Or from the Precipitation Analysis page at: <http://water.weather.gov/precip/>

Streamflow conditions are available from the United States Geological survey at:  
<http://waterdata.usgs.gov/tx/nwis/rt>

Soil moisture conditions are available from the Climate Prediction Center at:  
[http://www.cpc.ncep.noaa.gov/products/Soilmst\\_Monitoring/US/Soilmst/Soilmst.shtml](http://www.cpc.ncep.noaa.gov/products/Soilmst_Monitoring/US/Soilmst/Soilmst.shtml)

National Integrated Drought Information System: <http://www.drought.gov/>